8275 Model 416 High Performance Ethernet
Workgroup Switch

Release Notes for Operational Code Version 1.2.1 - January 2000

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First Edition (January 2000)

These Release Notes apply to Version 1.2.1 of the Operational Code for the IBM 8275 Model 416 High Performance Ethernet Workgroup Switch.

Submit any questions or comments about the contents of this document by visiting the IBM Networking Web site:

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Version 1.2.1 Release Notes

New Functions

Version 1.2.1 provides the following new functions:
- None

Additional Changes

The following additional change is in Version 1.2.1: enhancements that enable the switch to transmit at wire speed for all frame sizes.

Where to Go for Information

Code Updates, Problems, or Questions

To obtain the latest 8275-416 operational code, to report problems, or to ask questions, use one of these methods:
- Go to the IBM Networking Web site at:

  `http://www.ibm.com/networking/support`
- If your 8275-416 is under warranty, contact your reseller or call IBM:
  - In the United States, call IBM at **1-800-772-2227**.
  - In Canada, call IBM at **1-800-IBM-SERV (1-800-426-7378)**.
  - Outside the United States and Canada, contact your place of purchase.
- If your 8275-416 is not under warranty, call IBM at **1-800-IBM-SERV (1-800-426-7378)**.

Product Information

For the current editions of the ***IBM 8275 Model 416 High Performance Ethernet Workgroup Switch User's Guide or IBM 8275 Model 416 High Performance Ethernet Workgroup Switch Release Notes,*** go to:

`http://www.ibm.com/networking/support/docs.nsf/8275docs?OpenView`

Network Management Applications

Network management using graphical network management applications is provided by the following IBM Nways Network Management products:
- Nways Manager for NT V2.0 or later
- Nways Manager for HP-UX V2.0 or later
- Nways Manager for AIX V2.0 or later

For the latest information about these products, go to the IBM Networking Web site at:

`http://www.ibm.com/networking/netmgt`

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Known Problems/Limitations

Configuration

1. **Limitation:**

   A power interruption while saving configuration data may cause the original configuration data to be lost.

   Symptom:
   The switch comes up after a power hit with the default configuration.

   Action:
   Keep a backup copy of the switch configuration so that the original configuration can be restored.

   Solution:
   Working as designed. No enhancements are currently planned.

Trunking

1. **Limitation:**

   All trunk members have the same spanning tree state as their parent trunk.

   Symptom:
   The trunk port members do not reflect their current spanning tree state on the Port Configuration Menu.

   Action:
   For any port whose “Type” field indicates that it is part of a trunk, you must go to the Trunk Configuration Menu to view its spanning tree state. All trunk members have the same spanning tree state as their parent trunk.

   Solution:
   Working as designed. No enhancements are currently planned.

2. **Limitation:**

   All trunk members have the same VLAN configuration as their parent trunk.

   Symptom:
   The VLAN configuration parameters for ports that are currently part of a trunk do not take affect until that port is no longer a member of a trunk.

Action:

In the VLAN Configuration Menu, trunk member ports can be configured individually. However, the configuration parameters will not take effect until the port is no longer a member of a trunk. Remove the port from the trunk to activate its current VLAN configuration.

Solution:

Working as designed. No enhancements are currently planned.

3. **Problem:**

   Trunk is automatically disabled by the switch.

   Symptom:

   Under heavy load conditions with VLANs enabled, a trunk's admin state may be automatically disabled. This occurs if the trunk's hardware requests cannot be handled before timing out. This will halt all traffic through the trunks and allow the switch time to process outstanding VLAN requests.

   Action:

   Enable the trunk's admin state.

   Solution:

   Working as designed. If this is a reoccurring problem, reduce the number of VLANs configured on the switch.

Gigabit

Limitation:

The gigabit adapter supports a limited set of statistics.

Symptom:

No gigabit statistics are available via SNMP.

Action:

Limited statistics are available from the terminal only.

Solution:

Use the terminal to obtain gigabit statistics. No enhancements are currently planned.

TFTP

Problem:

A TFTP session between the switch and an OS/2® station may fail when running with OS/2 Version 4.0.

Symptom:

TFTP download/upload session may fail in busy networks due to the TFTP time-out value being too short. The TFTP time-out value is a parameter used in some versions of OS/2 to allow for delays during a file transfer.

Action:

Run TFTP sessions during off-peak times when network traffic is light.

Solution:

Use a version of OS/2 TFTP that allows configuration of the TFTP time-out value (such as TCP/IP V3.00 for OS/2 CSD UN00959).

VLANs

1. **Problem:**

   VLAN configuration menu may leave erroneous residue on the screen.

   Symptom:
   Running with a fully loaded VLAN configuration for an extended time period (31 VLANs per port) can cause old data to remain on the VLAN menu, even after the VLANs have aged-out.

   Action:
   Refresh the screen to clear this message and view current data.

   Solution:
   This has no effect on switch operation. No enhancements are currently planned.

2. **Problem:**

   When the VLAN configuration is reset to default values and GVRP then is reenabled, the switch may continue to propagate VLAN registrations for static VLANs which existed prior to the reset.

   Symptom:
   While the propagation of stale VLAN information may create a nuisance, it does not create a problem in terms of traffic flow. There is no path through the switch for traffic which flows across these VLANs.

   Action:
   Reset the switch to clear up this problem.

   Solution:
   This has no effect on switch operation. No enhancements are currently planned.

3. **Limitation:**

   After a dynamic-to-static VLAN conversion, the VLAN behaves as a purely static VLAN.

   Symptom:
   After a dynamic-to-static VLAN conversion, the VLAN will no longer propagate registration to ports that are not included in the VLAN. This could cause downstream registrations to be lost.

   Action:
   After performing a dynamic-to-static VLAN conversion, configure all desired ports to be “Included” in the VLAN so that these ports will continue to propagate VLAN membership information.

   Solution:
   Working as designed. No enhancements are currently planned.

Messages

1. **Problem:**

   A message `Msg0x99ac0 (tNetTask): arptnew failed on...` is displayed on the screen.

   Symptom:
   A message `Msg0x99ac0 (tNetTask): arptnew failed on...` is displayed on the screen.

   Action:
   Refresh the screen to clear this message and view current data.

Solution:

This has no effect on switch operation. No enhancements are currently planned.

2. **Problem:**

   A message `Interrupt: Uninitialized Interrupt` is displayed on the screen.

   Symptom:

   A message `Interrupt: Uninitialized Interrupt` is sometimes displayed on the console under some trunk configurations.

   Action:

   Refresh the screen to clear this message and view current data.

   Solution:

   This has no effect on switch operation. No enhancements are currently planned.

Incorrect Statistics

1. **Limitation:**

   The hardware counters do not correctly detect Undersized or Oversized packets received. The hardware detects these packet types as CRC or alignment errors.

   Symptom:

   These counters incorrect:
   - Undersized packets received
   - Oversized packets received
   - CRC errors
   - Alignment errors

   Action:

   Know that the above counters are incorrect.

   Solution:

   No enhancements are planned.

2. **Limitation:**

   Several counters always return a value of zero.

   Symptom:

   These counters *always* return a value of zero:
   - Drop Events
   - Transmit Packet Errors
   - Receive Packet Discards
   - Transmit Packet Discards
   - Receive Packet Unknown Protocol
   - Transmit Queue Length

   Action:

   Ignore the above counters.

   Solution:

   No enhancements are planned.

Accessing the 8275-416

This section contains information about logging on to the terminal interface and about configuration settings for the terminal emulation sessions. For more information, see the IBM8275 Model 416 High Performance Ethernet Workgroup Switch *User's Guide*.

Login Name and Password

To access the 8275-416 using a VT100 terminal emulation application (EIA 232 port or Telnet) or Web browser, you must enter a login name and password. The default read/write access login name is *admin* with no password, and the default read-only access login name is *guest* with no password. You should change the login password to a more secure password. If you forget your read/write user name or password, contact IBM using the telephone numbers listed under the "Questions" or "Code Updates" sections.

Using the 8275-416 EIA 232 Port

To connect a workstation directly to the 8275-416's EIA 232 port, a null modem cable is required. To connect a modem to the 8275-416's EIA 232 port, use a standard EIA 232 cable. Configure your terminal emulation application with:

- 19200 bps
- No parity
- 8 data bits
- 1 stop bit
- No flow control
- VT100 emulation
- The communication port

Default SNMP Community Names

To access the 8275-416 using SNMP, the default SNMP read/write community name is *private* and the default read-only community name is *public*. You should change the community name to a more secure name.

8275-416 MIB Information

The latest IBM 8275-416 MIB can be obtained from the IBM Networking Web site at:

`http://www.ibm.com/networking/support`

Be sure you use the 8275-416 MIB Version 3 with operational code Version 1.2.

The following objects in the 8275-416 MIB are not supported by this version of code:

- `swPortMonitorNetworkConnection`
- `swDevTrapConsole`

Whenever the above objects are accessed, the 8275-416 will return an SNMP `GetResponse-PDU[2] error-status = no SuchName(2)`

Operating Considerations

Considerations When Using the Terminal Interface

The terminal interface uses VT100 terminal emulation and can be accessed using either the EIA 232 port or Telnet. Up to six terminal interface sessions (one EIA 232 and up to five Telnet) can be simultaneously active. The terminal interface supports one user name with read/write access and up to five user names with read only access. All active users will see the same information, including any configuration changes that have not been applied yet. Each user's screen will automatically refresh with the latest information every few seconds. When multiple

users are logged in, it is recommended that only one session is logged on using the read/write user name to avoid conflicting configuration changes.

When logged on using the EIA 232 port and the panel does not display a complete menu (for example, the EIA 232 cable was used on another device and then moved back to the 8275-416), a key that is valid for the current 8275-416 menu must be pressed to refresh the entire screen. You can press F1 (Help Menu) or F3 (Previous Menu) in this situation because they are valid on almost all panels.

Considerations When Using the Web Interface

Not all Web browsers take the same action when you press the Enter key. For example, Microsoft® Internet Explorer will generate a "submit action on the next available button" when you press the Enter key while the cursor is in an input field. On most menus, this will trigger the Apply function.

Considerations When Using Windows NT DHCP Service

If you are using Windows NT® DHCP Service, reload Service Pack 4, or later, for Windows NT 4.0 to ensure that you have the latest fixes or the 8275-416 will not work correctly with the DHCP Service in Windows NT. To set up the DHCP service to work correctly with the 8275-416, create a reservation. Be sure to set the IP Address, Subnet Mask, Router, and Host Name as options in the DHCP Service. If you do not set the option for the Host Name, then when the 8275-416 gets the IP Address from the DHCP Service the client name in the DHCP Service is deleted.

Port Monitoring Operation

1. The monitoring port transmits all frames as tagged; therefore, a network analyzer is remotely manageable only if it is 802.1Q aware.
2. The monitoring port is unable to transmit frames outside of its VLAN membership. Therefore, if the monitored port has ingress filtering disabled, any frames received or forwarded on that port that are not affiliated with a VLAN of which the monitored port is a member, will not be transmitted out of the monitoring port.
3. The monitoring port always transmits frames with the NCFI bit set. Therefore, frames not transmitted on the monitored port due to untagging and a set NCFI bit cannot be detected and filtered by the monitoring port. In this case, the monitoring port will transmit these frames, even though they are not transmitted by the monitored port. The existence of such frames in a network is expected to be a rare occurrence.
4. Frames not forwarded by the monitored port will not be monitored. These include:
   - Local frames
   - 802.3x PAUSE frames
   - Frames dropped due to ingress rules
   - Frames dropped due to forwarding rules

Recommended Distribution of VLAN Port Memberships

Up to 32 VLANs are concurrently supported by the 8275-416, but there are restrictions on VLAN configurations across base ports and across feature modules. For details, refer to the section entitled "Duplicate VLAN Configurations and Oversubscription of Switch Resources" in the *8275 Model 416 High Performance Ethernet Workgroup Switch, User's Guide*. The message
`Operation succeeded. WARNING: Resources exceeded!` appears when a potential oversubscription of switch resources is detected due to your VLAN configuration.

Updating 8275-416 Operational Code

This section contains the following information:
- Obtaining new 8275-416 operational code
- Loading 8275-416 operational code using Xmodem or TFTP

To determine the code version currently loaded on the 8275-416, you can use either of the following methods:
- On the Login panel displayed when you are using the terminal interface, look at the lower right corner and the version number appears after the word Operational.
- On the Inventory Information Menu under the System Information Menu, look at the value given for Software Version.

Obtaining New 8275-416 Operational Code

All of the code necessary for the 8275-416 to operate is contained in a single binary file. For information on how to obtain the most recent version, see section "Code Updates, Problems, or Questions" under "Where to Go for Information."

Loading New 8275-416 Operational Code

You can load the code onto the 8275-416 using either Xmodem (EIA 232 port only) or TFTP. To start executing the new code, you have to reset the 8275-416.

Loading Code Using Xmodem

To load new code using Xmodem, you must be using the EIA 232 port:

1. Copy the file containing the new code onto the workstation that is connected to the 8275-416 EIA 232 port.
2. Log on to the 8275-416 using your terminal emulation software and your read/write user name and password.
3. If your terminal baud rate has not been changed from the default value of 19 200 bps, you may want to configure the 8275-416 and the terminal emulation software for a higher baud rate so that the file transfer goes faster.
4. Select the System Utilities Menu and then the Download File to Switch Menu.
   a. Make sure that Download Mode is set to **XMODEM**.
   b. Change Start File Transfer to **Yes**.
   c. Select **APPLY**.
5. The message `Ready to Receive File code.bin in binary mode` appears. Enter:
   a. XMODEM or 1K-XMODEM for the protocol. 1K-XMODEM causes the file transfer to occur faster.
   b. The filename of the file to be transferred. Use the backslash (\) to separate the path name from the file name; use the forward slash (/) for AIX systems.
6. After the file transfer is complete, the 8275-416 will automatically copy the code to flash. Once the message `File transfer operation completed successfully.` appears, at any time you can reset the 8275-416 to execute the new code. Go to the System Utilities Menu, select **Reset Menu**, → **System Reset**.

Loading Using TFTP

TFTP code transfer can be done through the terminal interface, Web, or SNMP. The following instructions are for using the terminal interface:

1. Copy the file containing the new code onto your TFTP server. Make sure that the permission code for the file allows read access or "others." For example, on AIX or UNIX® systems, specify **chmod o+r *FILE*** where *FILE* is the name of the file to be transferred.
2. Log on to the 8275-416 using your terminal emulation software and your read/write user name and password.
3. Select the **System Utilities Menu** and then the **Download File to Switch Menu**.
   a. Make sure that Download Mode is set to **TFTP**.
   b. Configure the appropriate values for TFTP Server IP Address, TFTP File Path, and TFTP File Name. Use the backslash (\) to separate the path name from the file name; use the forward slash (/) for AIX systems.
   c. Change Start File Transfer to **Yes**.
   d. Select **APPLY**.
4. After the file transfer is complete, the 8275-416 will automatically copy the code to flash. Once the message `File transfer operation completed successfully.` appears, at any time you can reset the 8275-416 to execute the new code. For example, go to the System Utilities Menu and select **Reset Menu**, → **System Reset**.

For a description of the messages displayed during a TFTP file transfer, refer to the IBM8275 Model 416 High Performance Ethernet Workgroup Switch *User's Guide*.

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